

## A new species of *Hydrophis* (Serpentes: Hydrophiidae) from north-west Australian waters

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### Abstract

A new species of sea snake (*Hydrophis geometricus*) from north-west Australian waters is described. It is compared with *H. macdowelli* Kharin and *H. ocellatus* Gray.

### Introduction

Until recently most of the Western Australian Museum's hydrophiid collection comprised specimens found derelict along the Western Australian coast. Only a small part of it has been collected at sea, mostly by interested fishermen.

In an effort to improve the collection the Department of Ornithology and Herpetology of the Western Australian Museum has enlisted the help of marine biologists in the Western Australian Museum and the Western Australian Department of Fisheries with the result that in the last six years three valuable collections have been made off the north-west coast of Western Australia. Although the collections only totalled 48 specimens they represented 10 species, including three specimens of a new species of *Hydrophis* which is described below.

### Systematics

#### *Hydrophis geometricus* sp. nov.

#### Figure 1

#### Holotype

R76484 in Western Australian Museum collected by the late N.N. Sinclair on 9 March 1981 at 84 km NW of Dampier, Western Australia in 20°10'S, 116°06'E.

#### Paratypes

140 km NNE of Dampier (76481), 130 km NNW of Dampier (73663).

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### Diagnosis

A small-headed *Hydrophis* with a slender neck and deep, compressed body. Distinguishable from *Hydrophis ocellatus* by its colour pattern of very regular pentagons on flanks (rather than ellipses or spots) and the absence of a nasal cleft (present in *H. ocellatus*).

### Description

A moderately large snake (up to 1237 mm long) with a small head (1.6-1.8 times as long as wide), slender neck and a very deep, compressed body. Tail 11.7-17.6% of snout-vent length.

Head shields entire. Rostral as wide as high. Nasals large, in contact throughout their length. Nasal cleft absent. Prefrontals small. Frontal 1.5-1.9 times as long as wide (mean 1.7). Preocular one, postoculars two (three on one side of one specimen). Anterior temporals mostly one, sometimes two. Upper labials seven or eight, second in contact with preocular, third and fourth or third to fifth entering orbit. Lower labials eight or nine, usually first three or four entire, remainder with small fragments at lip.



Figure 1 *Hydrophis geometricus* (R76481). Photographed by N.N. Sinclair

Ventrals 288-304 (N 3, mean 293.6), smooth, occasionally divided (especially posteriorly). Dorsals juxtaposed, with a short keel. Scale rows at midbody 51-58 (N 3, mean 54.6); at neck 31-34 (N 3, mean 32.3, decreasing by 19-24); before vent 43-52 (N 3, mean 47.0, decreasing by 5-12).

Head greyish or greyish black. Lips olive. Body greyish black with narrow, regular (one scale wide) white bars across back which fork on upper flanks to form apical angle of 34 to 35 contiguous pentagons. Lower flanks blackish or grey, flecked yellowish or whitish. Tail with yellowish-grey elliptic blotches separated by narrow yellowish-white bars.

### Distribution

Continental shelf off the north-west Australian coast (Figure 2).



Figure 2 Map showing location of specimens of *Hydrophis geometricus* off the north-west coast of Western Australia.

### Remarks

*Hydrophis macdowelli* Kharin and *H. ocellatus* Gray are the only two species of sea snake from north-west Australian waters which have small heads and deep, compressed bodies (at least posteriorly). Neither species has a flank pattern anything like the regular pentagons of *H. geometricus* (three approximately longitudinal series of small dark grey marks in *H. macdowelli*; elliptic or circular spots in *H. ocellatus*).

R73663 was trawled in 93-103 m at 1650 hrs.